



DEPARTMENT OF THE AIR FORCE  
59TH MEDICAL WING (AETC)  
JOINT BASE SAN ANTONIO - LACKLAND TEXAS

14 FEB 2017

MEMORANDUM FOR 959 CSPS 44E1A

ATTN: CAPT BRIAN P. MURRAY

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

1. Your paper, entitled 7 Day Old Female "Acting Differently" presented at/published to Academic Academy of Emergency Medicine Conference 2017, Orlando, FL, 16-20 March 2017 in accordance with MDWI 41-108, has been approved and assigned local file #17067.
2. Pertinent biographic information (name of author(s), title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.
3. Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are 59 MDW staff member, we can forward your request for funds to the designated wing POC.
4. Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

Linda Steel-Goodwin

LINDA STEEL-GOODWIN, Col, USAF, BSC  
Director, Clinical Investigations & Research Support

# PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

## INSTRUCTIONS

### USE ONLY THE MOST CURRENT 59 MDW FORM 3039 LOCATED ON AF E-PUBLISHING

1. The author must complete page two of this form:
  - a. In Section 2, add the funding source for your study [ e.g., 59 MDW CRD Graduate Health Sciences Education (GHSE) (SG5 O&M); SG5 R&D; Tri-Service Nursing Research Program (TSNRP); Defense Medical Research & Development Program (DMRDP); NIH; Congressionally Directed Medical Research Program (CDMRP) ; Grants; etc.]
  - b. In Section 2, there may be funding available for journal costs, if your department is not paying for figures, tables or photographs for your publication. Please state "YES" or "NO" in Section 2 of the form, if you need publication funding support.
2. Print your name, rank/grade, sign and date the form in the author's signature block or use an electronic signature.
3. Attach a copy of the 59 MDW IRB or IACUC approval letter for the research related study. If this is a technical publication/presentation, state the type (e.g. case report, QA/QI study, program evaluation study, informational report/briefing, etc.) in the "Protocol Title" box.
4. Attach a copy of your abstract, paper, poster and other supporting documentation.
5. Save and forward, via email, the processing form and all supporting documentation to your unit commander, program director or immediate supervisor for review/approval.
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7. Submit your completed form and all supporting documentation to the CRD for processing (59crdpubspres@us.af.mil). **This should be accomplished no later than 30 days before final clearance is required to publish/present your materials.** If you have any questions or concerns, please contact the 59 CRD/Publications and Presentations Section at 292-7141 for assistance.
8. The 59 CRD/Publications and Presentations Section will route the request form to clinical investigations, 502 ISG/JAC (Ethics Review) and Public Affairs (59 MDW/PA) for review and then forward you a final letter of approval or disapproval.
9. Once your manuscript, poster or presentation has been approved for a one-time public release, you may proceed with your publication or presentation submission activities, as stated on this form. **Note:** For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.
10. If your manuscript is accepted for scientific publication, please contact the 59 CRD/Publications and Presentations Section at 292-7141. This information is reported to the 59 MDW/CC. All medical research or technical information publications/presentations must be reported to the Defense Technical Information Center (DITC). See 59 MDWI 41-108, *Presentation and Publication of Medical and Technical Papers*, for additional information.
11. The Joint Ethics Regulation (JER) DoD 5500.07-R, *Standards of Conduct*, provides standards of ethical conduct for all DoD personnel and their interactions with other non-DoD entities, organizations, societies, conferences, etc. Part of the Form 3039 review and approval process includes a legal ethics review to address any potential conflicts related to DoD personnel participating in non-DoD sponsored conferences, professional meetings, publication/presentation disclosures to domestic and foreign audiences, DoD personnel accepting non-DoD contributions, awards, honoraria, gifts, etc. The specific circumstances for your presentation will determine whether a legal review is necessary. **If you (as the author) or your supervisor check "NO" in block 17 of the Form 3039, your research or technical documents will not be forwarded to the 502 ISG/JAC legal office for an ethics review.** To assist you in making this decision about whether to request a legal review, the following examples are provided as a guideline:

For presentations before professional societies and like organizations, the 59 MDW Public Affairs Office (PAO) will provide the needed review to ensure proper disclaimers are included and the subject matter of the presentation does not create any cause for DoD concern.

If the sponsor of a conference or meeting is a DoD entity, an ethics review of your presentation is not required, since the DoD entity is responsible to obtain all approvals for the event.

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If you are receiving an honorarium or payment for speaking, a legal ethics review is required.

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**NOTE:** All abstracts, papers, posters, etc., should contain the following disclaimer statement:

***"The views expressed are those of the [author(s)] [presenter(s)] and do not reflect the official views or policy of the Department of Defense or its Components"***

**NOTE:** All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving humans:

***"The voluntary, fully informed consent of the subjects used in this research was obtained as required by 32 CFR 219 and DODI 3216.02\_AFI 40-402."***

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***"The experiments reported herein were conducted according to the principles set forth in the National Institute of Health Publication No. 80-23, Guide for the Care and Use of Laboratory Animals and the Animal Welfare Act of 1966, as amended."***



<b>PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS</b>			
1. TO: CLINICAL RESEARCH	2. FROM: (Author's Name, Rank, Grade, Office Symbol) Brian P. Murray, Capt, USAF, MC 44E1A	3. GME/GHSE STUDENT: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	4. PROTOCOL NUMBER:
5. PROTOCOL TITLE: ( <b>NOTE:</b> For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.) N/A			
6. TITLE OF MATERIAL TO BE PUBLISHED OR PRESENTED: 7 Day Old Female "Acting Differently"			
7. FUNDING RECEIVED FOR THIS STUDY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO FUNDING SOURCE:			
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9. IS THIS MATERIAL CLASSIFIED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
10. IS THIS MATERIAL SUBJECT TO ANY LEGAL RESTRICTIONS FOR PUBLICATION OR PRESENTATION THROUGH A COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA), MATERIAL TRANSFER AGREEMENT (MTA), INTELLECTUAL PROPERTY RIGHTS AGREEMENT ETC.? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <b>NOTE:</b> If the answer is YES then attach a copy of the Agreement to the Publications/Presentations Request Form.			
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DATE 27 February 2017			
14. 59 MDW PRIMARY POINT OF CONTACT (Last Name, First Name, M.I., email) Murray, Brian P. brian.p.murray20.mil@mail.mil			15. DUTY PHONE/PAGER NUMBER 201-562-4686
16. AUTHORSHIP AND CO-AUTHOR(S) List in the order they will appear in the manuscript.			
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c. Justin Peacock, MD PhD	Maj	959CSPS/59MDW	
d. Matthew Nichols, DO	Maj		USARMY MEDCOM Rese
e.			
17. IS A 502 ISG/JAC ETHICS REVIEW REQUIRED (JER DOD 5500.07-R)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
I CERTIFY ANY HUMAN OR ANIMAL RESEARCH RELATED STUDIES WERE APPROVED AND PERFORMED IN STRICT ACCORDANCE WITH 32 CFR 219, AFMAN 40-401_IP, AND 59 MDWI 41-108. I HAVE READ THE FINAL VERSION OF THE ATTACHED MATERIAL AND CERTIFY THAT IT IS AN ACCURATE MANUSCRIPT FOR PUBLICATION AND/OR PRESENTATION.			
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21. APPROVING AUTHORITY'S PRINTED NAME, RANK, TITLE Daniel J Sessions MD, MAJ, APD		22. APPROVING AUTHORITY'S SIGNATURE SESSIONS.DANIEL.JOHN.1275555580 <small>(Signatures must be typed in all caps. Do not use a signature that is not your own. Do not use a signature that is not your own. Do not use a signature that is not your own.)</small>	23. DATE January 27, 2017

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26. DATE REVIEWED February 09, 2017		27. DATE FORWARDED TO 502 ISG/JAC	
28. AUTHOR CONTACTED FOR RECOMMENDED OR NECESSARY CHANGES: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES If yes, give date. <input type="checkbox"/> N/A			
29. COMMENTS <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED Single subject case study with appropriate disclaimers, approved			
30. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Kupferer/GS13/Human Research Subject Protection Expert		31. REVIEWER SIGNATURE KUPFERER, KEVIN.R. 1086667270 <small>Digitally signed by KUPFERER, KEVIN.R. 1086667270 DN: cn=KUPFERER, o=59 MDW, ou=59 MDW, email=KUPFERER, KEVIN.R. 1086667270 Date: 2017.02.09 11:08:45 -0500</small>	32. DATE February 09, 2017

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42. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Inuma, SSgt/E-5, 59 MDW Public Affairs		43. REVIEWER SIGNATURE INUMA, KEVIN.MITSUGU.1296227 613 <small>Digitally signed by INUMA, KEVIN.MITSUGU.1296227613 DN: cn=INUMA, o=59 MDW, ou=59 MDW, email=INUMA, KEVIN.MITSUGU.1296227613 Date: 2017.02.13 10:24:04 -0500</small>	44. DATE February 13, 2017

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## 7 Day Old Female "Acting Differently"

Hugh M. Hiller, MSIV, 2LT, USAR, MSC; Brian P. Murray DO, Capt, USAF, MC;  
Justin G. Peacock MD PhD, Maj, USAF, MC; Matthew Nichols DO, MAJ, USAR, MC  
San Antonio Military Medical Center, Fort Sam Houston, TX

### History

**HPI:** 7-day-old female presented with a 9 hour history of "acting differently", emesis and subsequent anorexia per parents. The patient had one wet diaper in 12 hours. Her parent's denied fever, diarrhea, cough or difficulty breathing. Sick contacts included her grandmother who recently experienced self-limited gastroenteritis.

**PM/S/FHx:** The Child was born at 38+4 weeks by C-section due to non-reassuring fetal heart tones. She required positive pressure ventilation for APGAR scores of 2, 7, and 8 at 1, 5, and 10 minutes, for which she spent one night in the NICU for observation.

### Physical Exam

**Vitals:** BP 125/68, HR 124, RR 40, SpO<sub>2</sub> 96% RA, temp 98.0°F rectal

**General:** Easily aroused, strong cry. Good tone.

**HEENT:** Anterior fontanelle taught, PERRL, EMOI.

Clear oropharynx, MMM, neck supple. No scalp hematomas or bruises. Fundoscopic exam was without retinal hemorrhages.

**Cardiovascular:** RRR, no M/G/R.

**Respiratory:** CTA B/L, no W/R/R

**Abdomen:** soft, NTND, normal BS, no hepatomegaly

**Neurological:** Startle/grip reflexes intact, strong suckling.

**Skin:** No rash, mottling, bruises, or petechia

### Results

White Blood Cells: 18.2

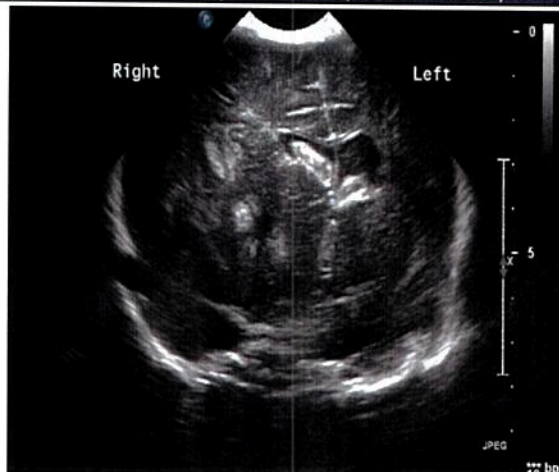
Hemoglobin/Hematocrit: 91.4/41.7

Platelets: 127

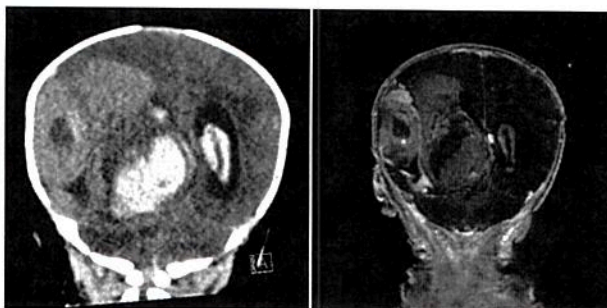
Metabolic Panel: WNL

### Case Conclusion

The differential diagnosis for the etiology of the cerebral hemorrhage was a congenital vascular malformation, a hemorrhagic tumor, a congenital heart disease or trauma. She was transferred to an outside hospital for further evaluation and management by pediatric neurosurgery.



**Figure 1A:** Coronal newborn ultrasound through the anterior fontanelle showing an intracranial mass and hemorrhage in the right occipital and parietal region with significant mass effect on the right ventricle and midline shift.



**Figure 1B:** Coronal CT head without contrast showing a hypodense mass centered in the right occipital/parietal region with significant mass effect on the right lateral ventricle and right to left midline shift and suggestion of developing hydrocephalus in the left lateral ventricle.

### Questions

1. What are the indications for lumbar puncture in the neonatal population?
2. Under what conditions would you not want to perform a lumbar puncture evaluate for meningitis?

### Answers

1. A lumbar puncture should be performed in any febrile or septic appearing neonate, as well as in any neonate in whom intracranial bleed is suspected but not seen on CT. Such symptoms include but are not limited to fever (either subjectively or in the ED), lethargy or focal neurologic deficits.
2. Patients at risk for cerebral herniation, as in this case, should not undergo a lumbar puncture. Risk factors for herniation include any obstruction of the CSF outflow, such as a lesion causing a mass effect with midline shift and increased intracranial pressure. Due to cerebral spinal fluid outflow obstruction.

### Discussion/Pearls

- Point of care trans-fontanelle ultrasound in the neonatal population is inexpensive, low risk, and can have a profound impact on clinical outcomes. While this form of ultrasound is not sensitive enough to diagnose low grade brain bleeds, it can be a useful tool to rule out large bleeds and masses that pose a risk of herniation with lumbar puncture
- Point of care trans-fontanelle ultrasound is a skill routinely utilized in the Neonatal Intensive Care Unit, but is one in which Emergency Medicine physicians are not yet trained. It is a rapid, low cost, and effective procedure to evaluate for large and obvious intracranial pathology in the neonatal population. It is especially useful in critically ill neonates in whom cranial imaging is desired, but where comprehensive ultrasound or computed tomography imaging would cause a critical patient to leave the relative safety of the Emergency Department and delay the onset of definitive care.
- The clinical applications of ultrasound in the Emergency Department are expanding rapidly, making competency in use of this modality of the utmost importance to the practice of Emergency Medicine.

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